

Work Order ID 73882

Friday, September 16, 2011 3:26:05 PM

Page 1

Item ID: D206-642-151

Revision ID:

Item Name: Replacement Skidtube

Start Date: 9/16/2011 Start Qty: 1.00

Required Date: 10/21/2011 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: mf Date: 11-09-19 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3804	A
IIN-D206-642	O

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Document Control

Photocopy bluefile & type labels per PPP D206-642-151 CHG001

N/A

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 9/16/2011 Start Qty: 1.00



Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Aluminum Rod ☐ M112860

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

11/09/20

BE 11/09/20

DD 11-9-20

11/09/21

11-9-26

Dart Aerospace Ltd

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

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Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.
****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

8/11/27



11-9-26



11-9-27

Dart Aerospace Ltd

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Stop



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140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

160

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

DD

11-9-27

11/09/27

Dart Aerospace Ltd

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

11-9-27

180



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: ☒ 11/09/27 ☐ Time: ☐ 3:30 PMFinish Date: ☒ 11/10/27 ☐ Time: ☐ 4:00 PM

Pick:

Qty ☐ Part Number ☐ Description ☐ BatchA/R ☐ Sikaflex-291 ☒ 118393 ☐Sikaflex expire date: ☒ 12/04/05DL
11/09/27

Dart Aerospace Ltd

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

DP

11-9-28

Dart Aerospace Ltd

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Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-remove alodine from around hole and prepare for welding

JW 11-09-29

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch
A/R ☐ Aluminum Rod ☐ M117884BE 11/10/03
JB 11/10/04

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/R ☐ SS Rod ☐

None

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

PMB 11/10/04
11-10-5

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NOTE: Date & initial all entries

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Page 8

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Customer:

Required Date: 10/21/2011 **Req'd Qty:** 1.00

00000000000000000000000000000000



**Insp.
Stamp**

[illegible]

Install D2680-041 Nut Plate as per Dwg D3804

11-10-54

THE UNIVERSITY OF CHICAGO

8 u u o u o u

Quality Control

Qc9 \longrightarrow ~~10.05~~ 10.05

RESEARCH DESIGN AND METHODS

8 1110104

Quality Control

Dart Aerospace Ltd

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QtyReject
QtyReject
NumberInsp.
Stamp

240

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

1 BR 11.10.6

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

Powder Coating

START TIME:
OVEN TEMPERATURE:
FINISH TIME:7:50
320 OF
8:20

0.00

X φ m-f 11/10/11

260

QC3- Inspect Part Finish

0.00



QC

Memo

Quality Control

0.00

1 φ M 11/10/11

Dart Aerospace Ltd

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270

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ 1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.

1.64 *0* *11/10/12*

280

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ 1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive
A/R ☐ Sikaflex-291 ☐ *11/18/39*
Sikaflex expire date: ☐ *12/10/12*

2- Install wearplate as per dwg

2-Wing Walk as per Dwg D3804 and QSI 005 4.4

Batch: *X1118315*

1.64 *0* *11/10/12*

Dart Aerospace Ltd

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Plan
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QtyReject
QtyReject
NumberInsp.
Stamp

290



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

8/16/10/13

300



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/16/10/13

2/

LH

310



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPP D206-642-151

Location:

PPP Rev: PPP 74392

Dart Aerospace Ltd

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DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

320

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/10/19 [Signature]
MF
11-10-18

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 1

Work Order ID: 73882

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620 Manufactured No

110

Each

12.0000

1

1



Skidtube, 206 Skidtube

Location

Loc Qty

Loc Code

LG

12

68136

1

71616

5

71617

6

73781

11/09/20

DE/DP

D2647 Manufactured No

110

Each

44.0000

1

1



Cap

Location

Loc Qty

Loc Code

LG002

44

55352

14

71171

30



BEA/09/20

CR3212-4-04 Purchased No

180

Each

1,655.000

52

52



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

1655

116471

78

117816

477

118686

100

118840

1000



DE
11/09/27

59

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 2

Work Order ID: 73882

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D2654-1
Web
Manufactured No

180 Each 6.0000 1 1

Location	Loc Qty	Loc Code
LG 73790	6	
64562	6	

11/09/27

D3286-1
Doubler
Manufactured No

180 Each 32.0000 2 2

Location	Loc Qty	Loc Code
LG002 1374111	32	
52844	11	
64563	21	

11-9-26

D2649
Cross Bolt Spacer
Manufactured No

200 Each 289.0000 19 19

Location	Loc Qty	Loc Code
LG	6	
68224	2	
71355	2	
72704	2	
LG001	283	
65317	1	
68507	11	
73390	271	

11-10-03
B73857 19

D3286-3
Spacer
Manufactured No

200 Each 27.0000 2 2

Location	Loc Qty	Loc Code
LG002	27	
64564	27	

11-10-04

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Page 2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 3

Work Order ID: 73882

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

210

Each

19.0000

1 1



Nut Plate

Location

Loc Qty

Loc Code

ST020

73334

19

55366

17

70088

2

①

DP 11-10-5

CR3212-4-03 Purchased No

210

Each

1,138.000

2 2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

110139

2

ST311

1136

114859

1136

②

DP 11-10-5

AN960JD416 NAS1149D0463J Purchased No

210

Each

0.0000

1 1



Washer

M118384

(x1) 11/10/12

CCR264SS3-3 Purchased No

210

Each

435.0000

2 2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

433

117086

23

117849

410

②

DP 11-10-5

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Page 3

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 4

Work Order ID: 73882

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

29.0000

1

1



u 11/10/12

Screw

Location

Loc Qty

Loc Code

FP-A

8

115460

8

ST292

21

115460

21

x1

D2651-1

Manufactured

No

270

Each

289.0000

6

6



u 11/10/12

Plug

Location

Loc Qty

Loc Code

fpa

109

69018

109

FP-A

180

57869

1

66445

10

67760

36

70691

100

70839

2

71037

31

x6

D2651-3

Manufactured

No

270

Each

799.0000

6

6



u 11/10/12

O-Ring

Location

Loc Qty

Loc Code

FP-A

799

61962

12

66956

282

73489

505

x6

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Page 5

Work Order ID: 73882



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D3873-1

Manufactured No

280

Each

160.0000

14

14



Bushing



xl 11/10/12

Location

Loc Qty

Loc Code

ST084

4

B73829

xl

68247

4

ST088

156

64760

1

70690

54

71837

101

D2646

Manufactured No

280

Each

89.0000

1

1



Aft Cap



xl 11/10/12

Location

Loc Qty

Loc Code

FP004

45

68280

45

FP006

5

62678

5

FP-4

35

70945

1

71070

34

fp5

4

xl

71038

4

D3805-041

Manufactured No

280

Each

0.0000

1

1



Wearplate Assembly Fwd, Low Gear



B73814

(xl) xl 11/10/12

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Page 5

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 6

Work Order ID: 73882

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

280

Each

1,296.000

2

2



Screw



HL 11/10/12

Location

Loc Qty

Loc Code

ST291

1296

115108

96

117423

300

118378

400

118910

500

VZ

MS21042L3

Purchased

No

280

Each

2,603.000

7

7



Nut



HL 11/10/12

Location

Loc Qty

Loc Code

ST300

2603

117441

24

117601

374

117885

205

118451

1000

118927

1000

V7

D3805-045

Manufactured

No

280

Each

6.0000

1

1



Wearplate Assembly Aft, Low Gear



B73816

(x1) HL 11/10/12

Location

Loc Qty

Loc Code

FP

6

70878

6

AN960JD10L

NAS1149D03321

Purchased

No

280

Each

0.0000

2

2



Washer



M117087

(x2) HL 11/10/12

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Page 6

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 3:26:02 PM

Page 7

Work Order ID: 73882



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

AN3-37A

Purchased

No

280

Each

261.0000

7

7



Bolt



HL 11/10/12

Location

Loc Qty

Loc Code

ST353

211

111668

111

118628

100

ST354

50

117619

50

X7

NAS1149D0363J

Purchased

No

280

Each

2,623.000

7

7



Washer



HL 11/10/12

Location

Loc Qty

Loc Code

ST298

2623

117601

308

118077

1315

118612

1000

X7

Friday, September 16, 2011 3:26:03 PM

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Page 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	93	DART AEROSPACE USA, INC	
DRAWN	93	PORT HADLOCK, WA	
CHECKED	93	DRAWING NO.	REV. A
MFG. APPR.	93	D3804	SHEET 1 OF 5
APPROVED	93	TITLE	SCALE
DE APPR.	93	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

73880

RELEASED
09.03.07
PC ECN 09-536

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

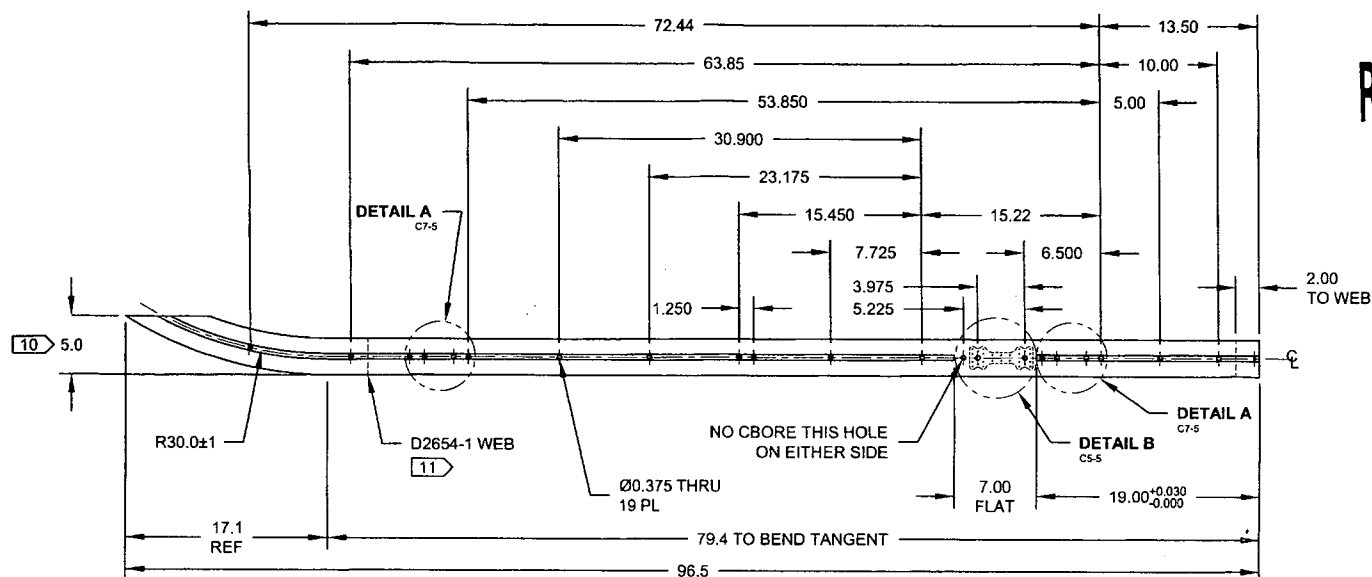
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

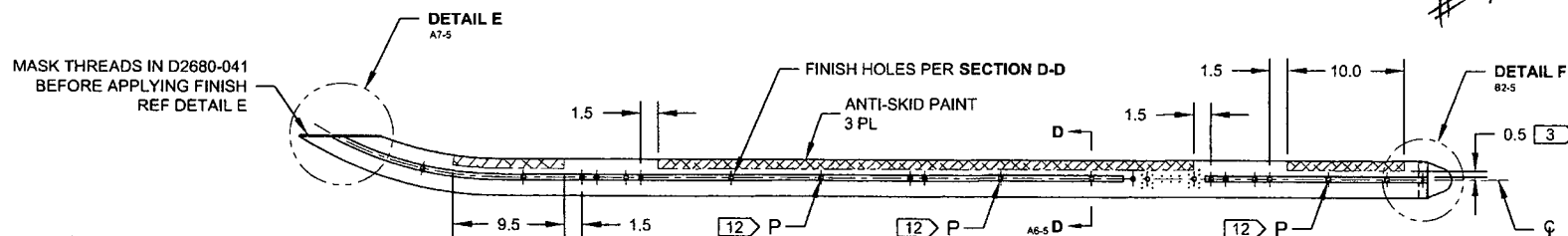
NOTE: Date & initial all entries

RELEASED
09.03.03



D3804-041 BENDING/DRILLING DETAIL

73882



D3804-041 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 2 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

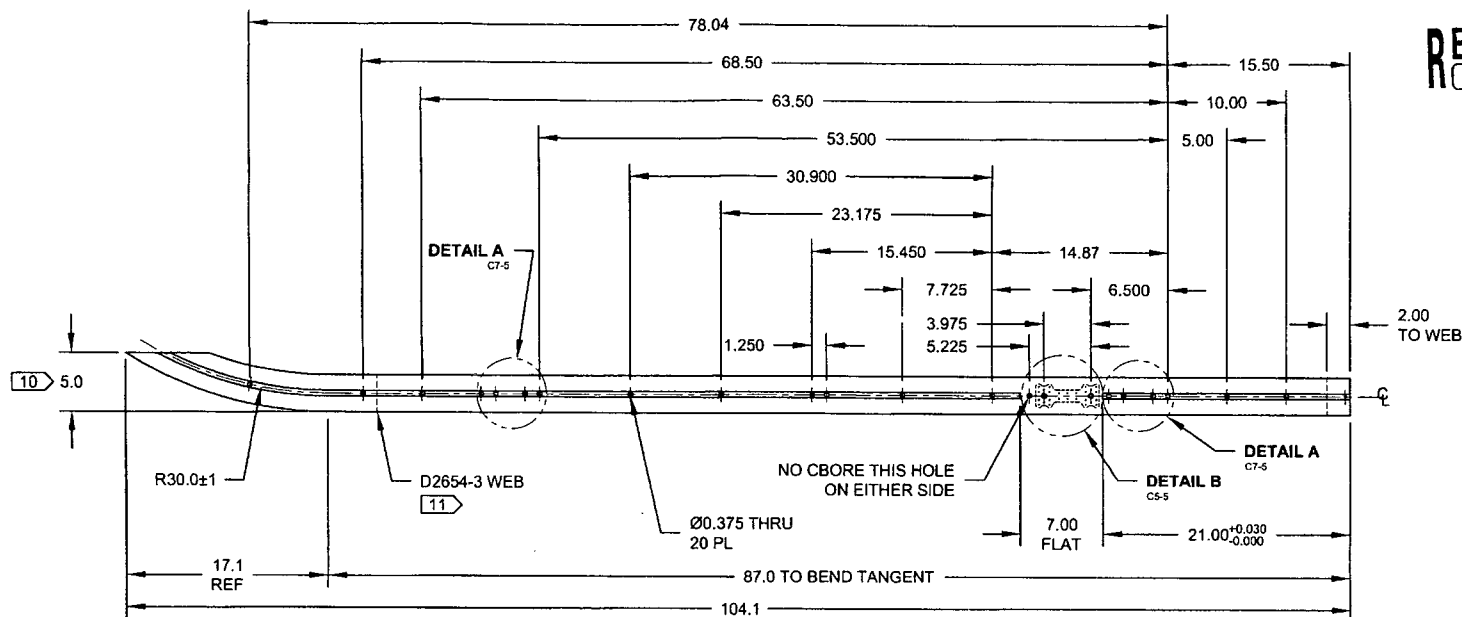
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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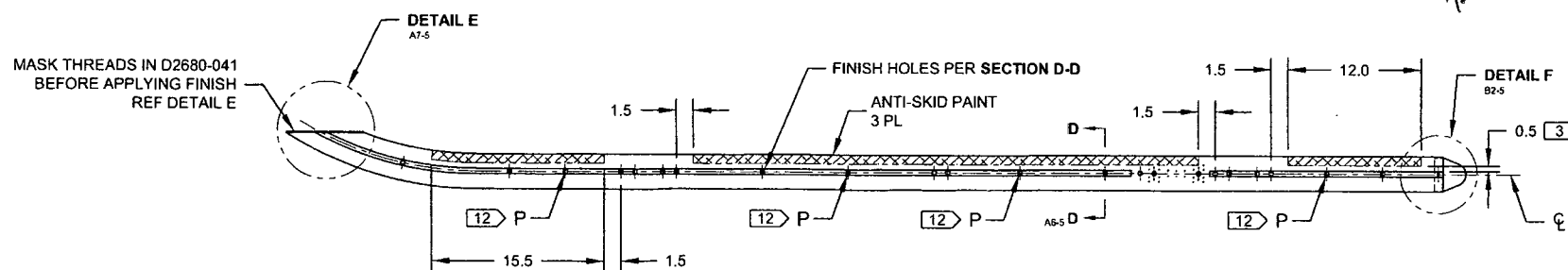
NOTE: Date & initial all entries

RELEASED
09.03.07



D3804-043 BENDING/DRILLING DETAIL

73582



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 3 OF 5
DE APPR.	97	TITLE	SCALE
DATE	08.07.07	SKIDTUBE ASSEMBLY, 206A/B	NTS

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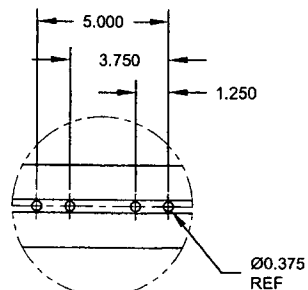
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

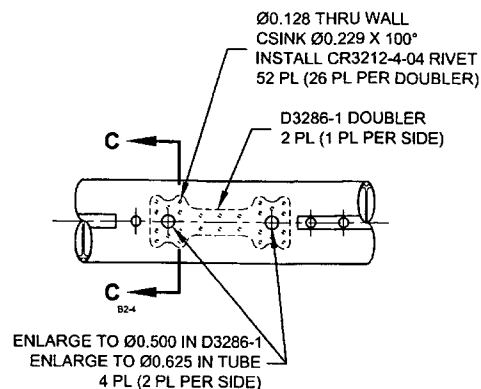
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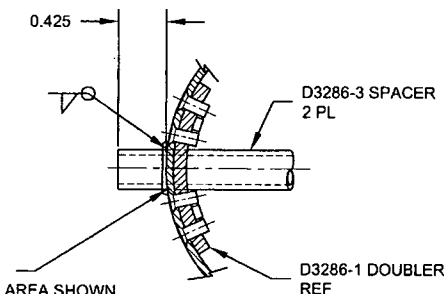
RELEASED
09-03-07



DETAIL A D6-2
SCALE NONE C2-2
D6-3
C2-3

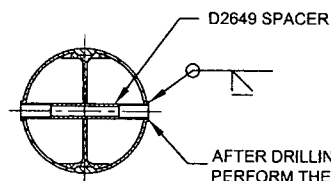


DETAIL B C3-2
SCALE NONE C3-3



- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C C6-4
PARTIAL SECTION
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

SECTION D-D A4-2
FOR Ø0.375 HOLES ONLY A4-3
SCALE NONE

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 4 OF 5
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#73882

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
09 07 03 03

CCR264SS3-3
RIVET
2 PL

CR3212-4-03 RIVET
2 PL

VIEW G-G
SCALE NONE A7.5

MS27039-4-06 SCREW
AN960JD416 WASHER

D2680-041
NUTPLATE

D2647 CAP, TO INSTALL:
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS REQD)
4. WELD D2647 IN PLACE
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE
IN PLACE

1.0 REMOVE RIDGE ON
INSIDE OF SKIDTUBE
LEAVE 0.070 MIN.

DETAIL E
SCALE NONE B7-2
B7-3

0.400

END OF WEB

BORE OUT END
OF SKIDTUBE
TO 0.75 DEPTH
AND 0.070 WALL

SEAL WITH
SIKAFLEX-241/291

D2646 AFT CAP

Ø0.204
REF

MS27039-1-08 SCREW
AN960JD10L WASHER
2 PL

DETAIL F
SCALE NONE B2-2
B2-3

#73880

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No.: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 266

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 704089
Part number: 5206 642 151
Description: 206
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier fatp duns Date of Test Coupon 11-09-22

Welder Barclay Elliott Date of Test Coupon 11-09-22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld